

Abstract

To provide a fuel cell that includes a cell unit formed by  
5 arranging an anode and a cathode on a proton exchange membrane  
and that can stably generate electricity with excellent  
characteristics. To realize such a fuel cell, wettability  
of the proton exchange membrane and the electrode catalyst  
layer is made uniform. In a gas diffusion layer 24 sandwiched  
10 between a cathode catalyst layer 22 and a cathode side separator  
plate 60, water retentivity in a predetermined range from  
an inlet for an oxidizing gas (air) is adjusted so as to be  
higher in parts 24A that face oxidant channels 65 than in  
parts 24B that face ribs 66. This wettability adjustment in  
15 the gas diffusion layer 24 is accomplished by setting water  
repellent material content per unit area in the channel facing  
parts 24A smaller than in the rib facing parts 24B.